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Congenital Cardiology Solutions

HYPERTENSION PATTERNS POST AORTIC COARCTATION REPAIR

Poster Contributions
Poster Sessions, Expo North
Monday, March 11, 2013, 9:45 a.m.-10:30 a.m.

Session Title: Congenital Cardiology Solutions: Adult Congenital Heart Disease
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Authors: *Carla Canniffe, David Celermajer, Kevin Walsh, Mater Misericordiae Hospital, Dublin, Ireland, Our Ladys Childrens Hospital Crumlin, dublin, Ireland*

Background: Up to 55% of patients who have undergone successful aortic coarctation repair develop late systolic hypertension, however the severity and patterns of this complication have not been well characterised.

Methods: All patients who had had coarctation repair and were ≥ 12 years old were eligible for inclusion. Patients had office and 24 hour ambulatory blood pressure (ABP) performed. Reports of recent cardiac imaging and cardiac risk factors were also recorded. Hypertension was defined as 24 hour mean BP >135/85mmHg or BP load ≥ 30% (adults) or >95th percentile for age and height (≤ 17years old).

Results: 364 patients with a history of repaired aortic coarctation were identified. Those with complex congenital heart disease, a significant residual gradient across their aorta, significant developmental delay and pregnant patients were excluded. 16 patients did not wish to participate, leaving a cohort of 295 patients. To date 148 patients have been prospectively studied. Mean age 28.9 years (range 12-71 years; 65.5% of cohort between 18-39years). 46.2% male. 56.2% had bicuspid aortic valves. 48.9% had been repaired within the first 24 months of life. 43.7% were on prescribed anti-hypertensive medication at the time of enrolment. 27.8% were found to have systolic hypertension on ABP recordings. 26.6% had a blunted nocturnal dip of < 10% and 42.2% had white-coat hypertension. The median age of those with systolic hypertension was 29years (range 12-55 years). Male patients had a higher prevalence of hypertension compared to female patients (p=0.02). There was no significant difference between the age at repair/ intervention and the presence of hypertension at follow up. Furthermore when we compared surgery (end to end anastomosis + subclavian flap, number=98) to percutaneous intervention (Stent, number=34) there was no significant difference in hypertension prevalence at follow up (p=0.8114).

Conclusions: Despite anatomically successful repair of aortic coarctation, both white coat and confirmed hypertension are common in young adult survivors.